Telenetics

4120 BIRCH STREET • SUITE 109 • NEWPORT BEACH, CALIF. 92660

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Telenetics 4120 BIRCH STREET • SUITE 109 • NEWPORT BEACH, CALIFORNIA 92660 • (714) 752-6363

Dear Sir:

Enclosed are the complete specifications and prices for our model 7511-01 Address Selector. This is a programmable unit that responds to a specific number and sequence of logic level events; is reset by out-of-sequence digits and/or interdigit delay.

We know you will be impressed with the reliability and performance of this product, and we look forward to serving your needs. All sales are net 30 days on approved credit, F.O.B. Factory or C.O.D. if you prefer.

If you are interested in additional information on this or our other component products, please don't hesitate to call.

Sincerely,

Robert J. Brown
Vice President
Marketing

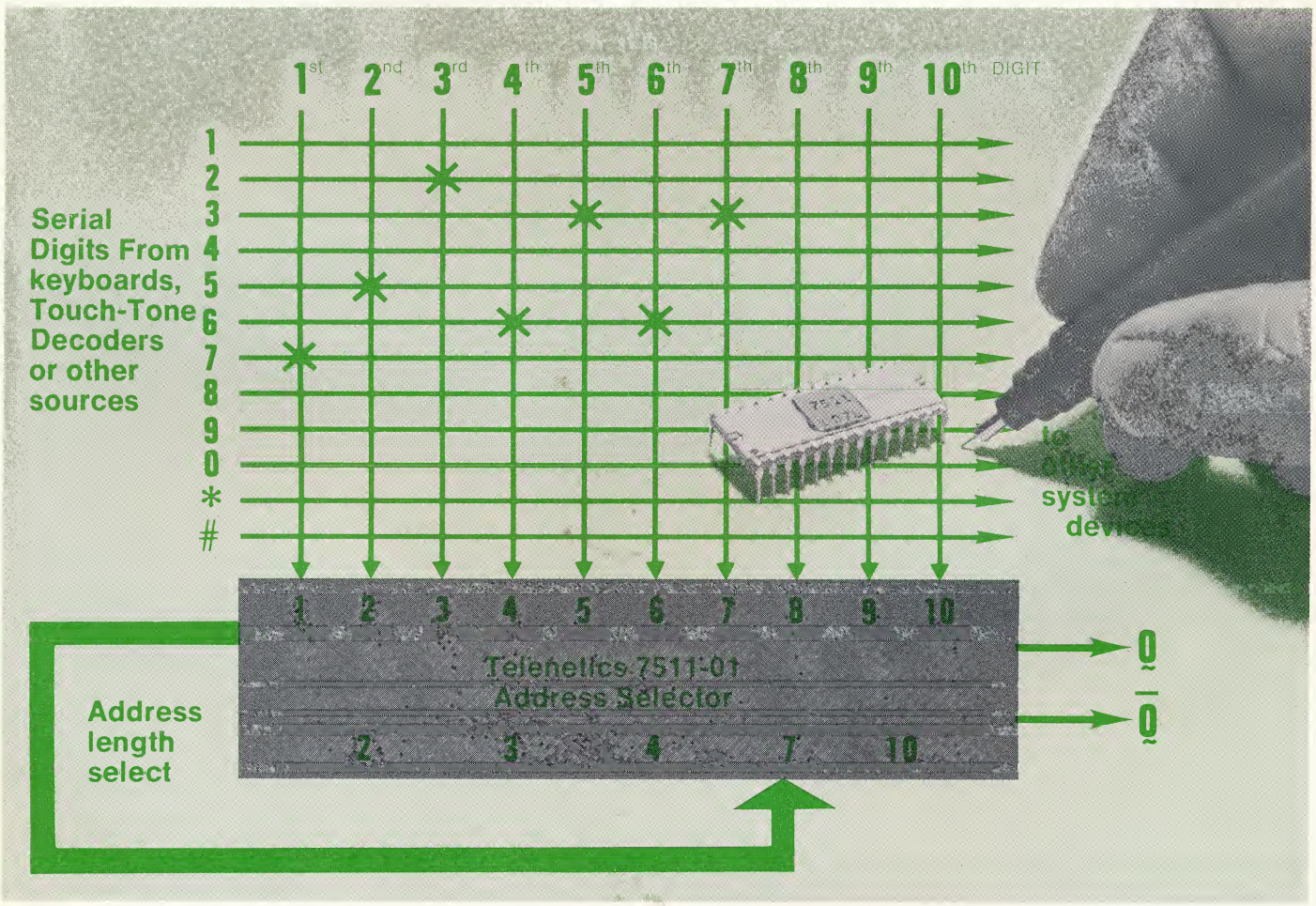
RJB:lk

Telenetics

Address Selector

MODEL 7511-01

What is an "address"? In this context an address is a series of digits comprising a number, as in a telephone number. The Telenetics Model 7511 Address Selector, when connected to a keyboard or other source of serial logic level inputs, provides an output upon receiving the programed sequence of address inputs.



In the example above, an address length of seven digits was selected, and our telephone number, 752-6363 programed in a matrix. Since any of the field of twelve inputs can be any of seven digits in the address, 7^{12} address combinations are possible (in this example). Thus the 7511 Address Selector equipped with a keyboard becomes an electronic combination lock. Or connected to the Telenetics 7516 Touch-Tone Decoder it provides coding security with station selection for busy communications systems.

Telenetics manufactures a series of microcircuit devices for Touch-Tone and other communications transmission and switching applications. Customers are invited to seek technical assistance by calling the factory. (714) 752-6363.

Description

The 7511 Address Selector provides an output in response to a cumulative total number of sequential inputs, if-and-only-if the inputs are entered in a fixed order within a maximum time interval. Out-of-sequence inputs, and/or too long an interval between successive inputs, resets the 7511 and no output results.

Complementary outputs, "Q" and "$\overline{Q}$" are provided. They toggle for a pin selected momentary interval or may be latched and manually reset. As a convenience a continuous one pulse per second clock output is provided, useful for winking lamps or similar functions.

Programming options are: Three momentary output enable intervals and five address code length selections of 2, 3, 4, 7 or 10 digits. A factory bonding option provides a fixed interdigit interval of five seconds. Ten, twenty or thirty second interdigit intervals can be provided on special order. These timed operations assume a 10kHz clock input reference. This reference frequency can range from 100 hertz to 50kHz to change all the timed sequences proportionately. Thus, for a 2.5 second interdigit interval and a 2 PPS output clock a 20kHz input clock is applied.

Out-of-sequence input detection (wrong digit reject) requires that all possible input events or digits be or'd and presented to the "ANY I/O". There a comparison is made between each successive input digit and an internal momentary latch. When an input is present at the "ANY I/O" but absent from the appropriate sequential latch, an error is assumed and the selector resets. Similarly, failure to detect an input digit within the time allowed resets the selector. Coding security may be enhanced by using long codes e.g. 7 digits offer more security than 2 digit codes. Also, the avoidance of sequential digits of the same value will enhance coding security as will reduction to the shortest reasonable interval for receipt of successive inputs.

The "ANY I/O" does not have to be connected with the result that "wrong digits" (those not programed in a particular address) will not be recognized. Thus a mixed series of digits may be encoded in a system to address a group of stations. For example, a single 7-digit entry might be used to select 25 stations that are assigned 3-digit addresses. In such a system any single digit may be set aside and connected to the "ANY I/O" pin to act as a "reset digit", to clear all stations preceding and following an address entry or in the event of code entry errors.

In ultra-secure applications the "ANY I/O" may be used as an output, and compared externally against the field of correct input digits. Valid inputs then occur at both the "ANY I/O" and the sequential inputs while invalid inputs do not. The absence of coincidence is then used to trigger an alarm or other security function.

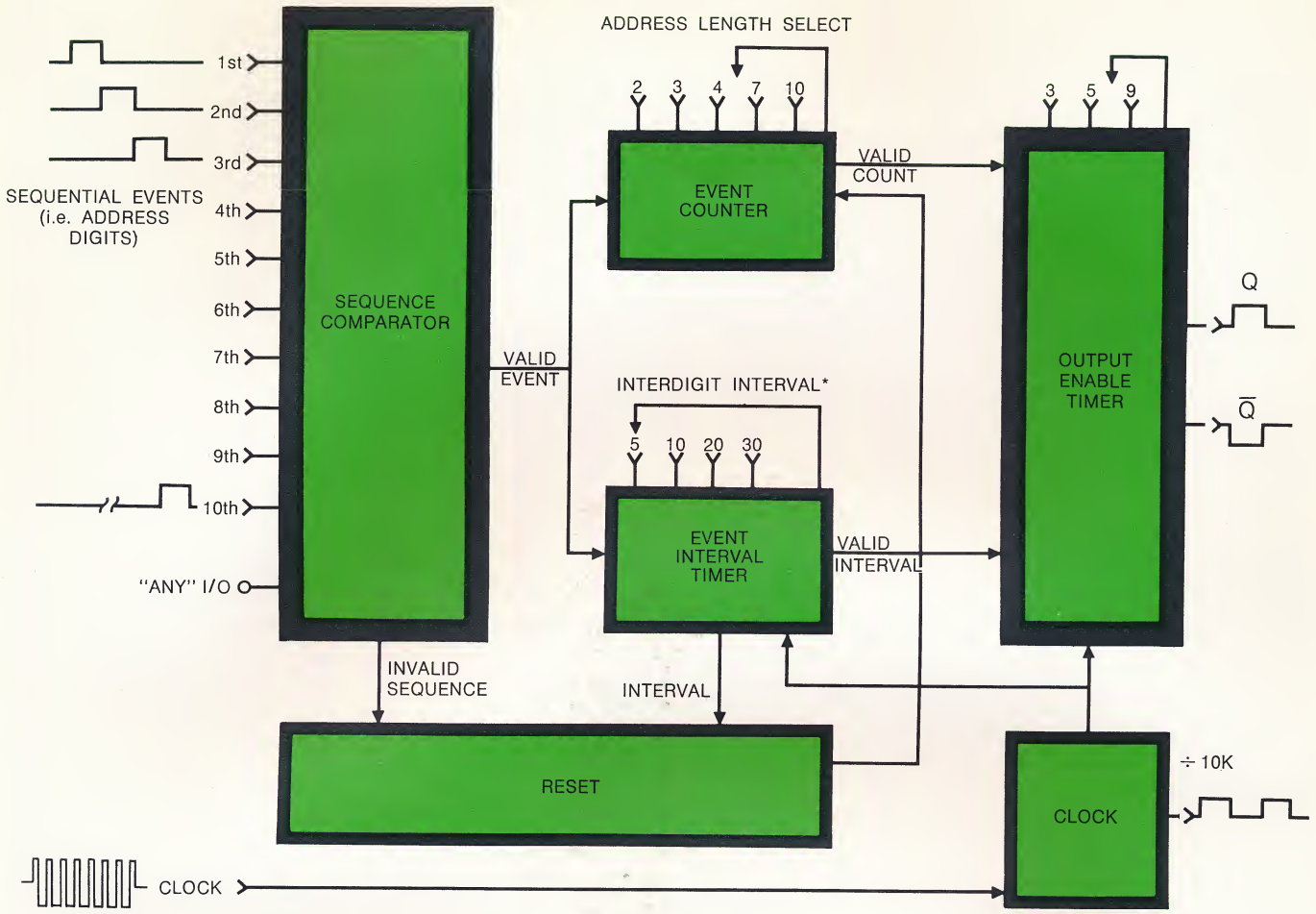
A word of caution—the 7511 inputs are not debounced and care should be exercised when interfacing it directly to keyboards or other mechanical switching devices. Also, due to the nature of its high impedance MOS logic, the unit may provide a false output upon the initial application of power.

A typical application of the 7511 Address Selector combines it with the Telenetics 7516 Touch-Tone Decoder. Any of the sixteen possible Touch-Tone digit outputs are hardwired to the 7511's inputs, establishing a flexible code facility with up to 10^{16} discrete addresses. The 7516 provides a 10kHz clock reference and an "ANY DATA COMMON" output useful in recognizing coding errors.

7511-01 Address Selector

SPECIFICATIONS

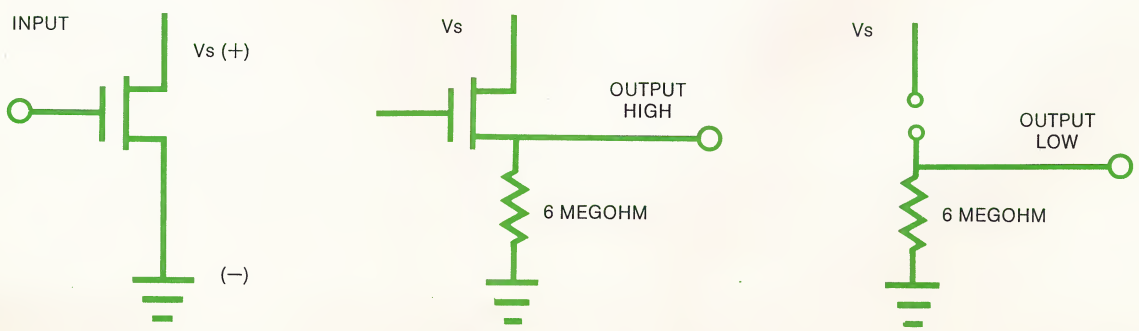
Input	
Input Data High:	$-V_S$ to $V_S-1.5$ V minimum
Input Data Low:	Ground to $V_S-3.0$ V maximum
Maximum Interdigit Interval (with 10 kHz Clock):	Five seconds
Minimum Interdigit Interval:	70 μS
Minimum Digit (Pulse) Duration:	70 μS
Input Clock Rate:	10 kHz nominal, 100 Hz to 50 kHz range
Input Clock Level:	$-V_S$ to $V_S-1.5$ V minimum
Address Length Program:	Pin selectable 2,3,4,7, & 10 input sequences
Code Capacity:	Address length factored by the number of available discrete inputs
Impedance:	High impedance MOS transistor input
Output	
Q and $\overline{Q}$, Active Pull-up:	Transfer on trailing edge of final input data pulse
Output Source Current:	12 mA typical @ 13.8 VDC into 1 kohm load
Output Level High:	V_S to $V_S-1.0$ V minimum into 5 kohm
Output Level Low:	Ground to +0.3 V maximum
Output Period (with 10 kHz Clock):	Pin selectable 3,5, & 9 seconds
Any Digit:	High for duration of a high on any input data pin inhibited during Q/$\overline{Q}$ output enable period
Power	
Supply Voltage V_S:	+13.8 VDC nominal ±30%
Supply Standby Current:	1.0 mA maximum
Tolerance to Supply Ripple:	500 mV maximum
Environmental & Physical	
Operating Temperature Range:	−30°C to 70°C (−22°F to 158°F)



FUNCTIONAL BLOCK DIAGRAM

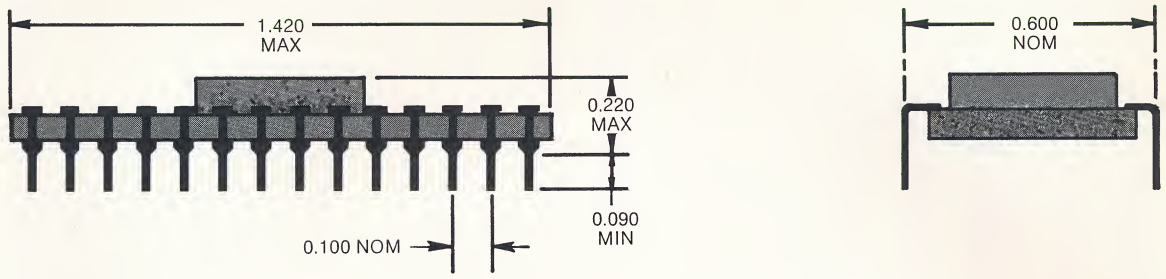
*Factory bonded for five seconds

Equivalent Circuits & Interface Information

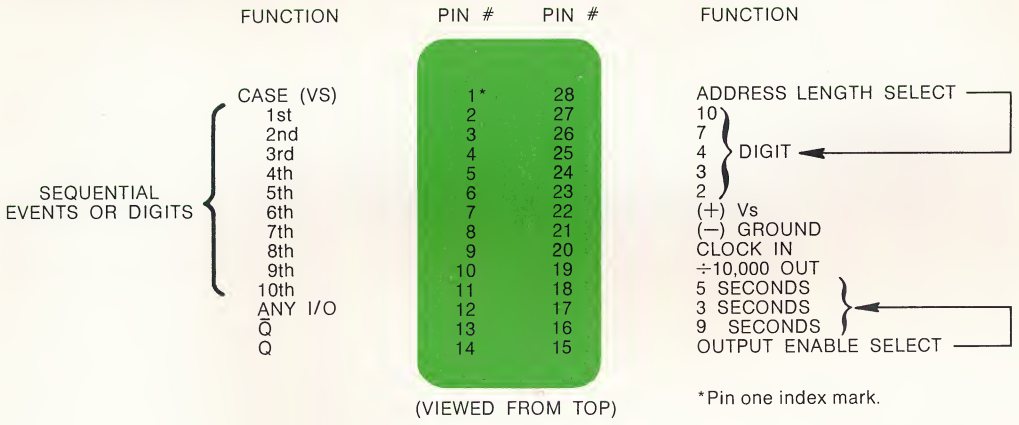


7511-01 Package Information

(28 Pin Dual-in-line Pkg.)



7511-01 Dip Pin Out Diagram



*Pin one index mark.

Notes

The 7511 interdigit interval is fixed at 5 seconds.
Times referenced in seconds are based on a 10kHz clock frequency input.
For a latched output, hold pin 15 high (V_S) and switch to ground to reset.

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OEM PRICE LIST

(Effective June 1, 1976)

7511-01 ADDRESS SELECTOR

A programmable Address Selector that responds to a specific number and sequence of logic level events; is reset by out-of-sequence digits and/or interdigit delay.

Order Quantity	Unit Price
1 - 9	$36
10 - 99	32
100 - 249	28
250 - 499	24
500 - 999	20
1,000 - 4,999	15

SALES TERMS: All prices and specifications are subject to change until confirmed by order acknowledgement. Prices quoted are ($) dollars U.S., F.O.B. Factory. Terms of sales are net 30 days, on approved credit.

5/13/76